

GBCS Scheme

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15ARC4.2

Fourth Semester B. Arch Degree Examination, June/July 2017

Materials and Methods in Building Construction – IV

Time: 4 hrs.

Max. Marks: 100

Note: Answer FIVE full questions, choosing one full question from each module.

Module-1

- 1 a. Explain the concept of flat slab/plate and their relevance in the evolution of RCC advanced slabs. (12 Marks)
- b. Explain through sketches the difference between flat plate and flat slabs. (08 Marks)

OR

- 2 Explain the principle and method of construction of any moment framed slab with 4 detailed junctions indicating reinforcement. (20 Marks)

Module-2

- 3 Explain the method of construction of Filler slab and their advantages. Give 4 examples of filler materials. (20 Marks)

OR

- 4 Draw plan and section of wattle slab for a span of 16m×16m (scale 1:20). Also draw in enlarged scale a section of the wattle indicating the reinforcement. (20 Marks)

Module-3

- 5 a. Discuss the potential of steel as a building material. (08 Marks)
- b. Explain manufacturing method of converting iron ore to pig iron. Sketch the blast furnace indicating the chemical reactions. (12 Marks)

OR

- 6 Draw in Isometric the corner junction of an ISMB 200 column with 2 beams of ISMB 150 meeting at right angles. Scale (1:2). (20 Marks)

Module-4

- 7 Draw plan, elevation and 2 junction detail (1:1 or 1:2) for a steel window measuring 1200mm (W) × 900mm (H). (20 Marks)

OR

- 8 Draw elevation and 3 junction details for a collapsible gate measuring 3.6m (W) × 3m(H). (20 Marks)

Module-5

- 9 Draw plan, elevation and 2 details for a aluminium casement window measuring 600mm (W) × 1000mm (H). (20 Marks)

OR

- 10 Draw plan, elevation and 2 details for a 3 track aluminium sliding window measuring 3.6m (W) × 2.1m (H). (20 Marks)

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